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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/884,910	06/21/2001	Shahryar Ghandeharizadeh	29250-000538	4771
7590	03/29/2004			EXAMINER
HARNESS, DICKEY & PIERCE, P.L.C.			FOX, BRYAN J	
P.O. Box 8910			ART UNIT	PAPER NUMBER
Reston, VA 20195			2686	
DATE MAILED: 03/29/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/884,910	GHANDEHARIZADEH ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Bryan J Fox	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 21 June 2001.  
 2a) This action is **FINAL**.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-12 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,2,4-8 and 10-12 is/are rejected.  
 7) Claim(s) 3 and 9 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
     Paper No(s)/Mail Date 6/11-19-02.

4) Interview Summary (PTO-413)  
     Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 2, 5, 7, 8, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hogan (US006442393B1) in view of Zadeh et al. (US006516195B1).

Regarding claim 1, Hogan discloses a system of mobile locating and power control for network optimization where the system monitors the power control commands to provide an indication of the quality of a signal and maps out the signal qualities of the system and comprises the steps of: providing at least one parameter indicative of a signal quality associated with a location of a mobile station, which reads on the claimed "continuously monitoring radio signals associated with the established call", comparing said parameter with a criteria to provide a comparison result and initiating a position request based on the result of said comparison, which reads on the

claimed "determining if a parameter associated with continuously monitored radio signal falls below a threshold" and "providing information associated with the location of the mobile terminal if the parameter falls below the threshold" (see column 4, lines 22-40)

While Hogan it appears the monitoring of signals is done while a call is in process and not while a mobile unit is idle, he fails to specifically point out the receiving a connect message from a mobile terminal to establish a call.

Zadeh et al. discloses a method of optimizing an telecommunications network where a predefined event, such as a call set-up event, triggers a positioning request and stores the information in a database for subsequent analysis (see column 3, lines 3-18).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Hogan with Zadeh et al. to include the above call set-up trigger to trigger the continuous monitoring disclosed by Hogan in order to avoid using system resources monitoring idle phones where not as much information may be obtained.

Regarding claim 2, the combination of Hogan and Zadeh et al. discloses the use of a trigger message when a call is set-up (see Zadeh et al. column 2, lines 55-66) and as discussed above in claim 1, the combination of Hogan and Zadeh et al. would continuously monitor the signal as claimed.

Regarding claim 5, the combination of Hogan and Zadeh et al. discloses the use of a GPS receiver to determine the location (see Hogan figure 1) and GPS receivers give location information in terms of Longitude and Latitude.

Regarding claim 7, Hogan discloses a system of mobile locating and power control for network optimization where the system monitors the power control commands to provide an indication of the quality of a signal and maps out the signal qualities of the system and comprises the steps of: providing at least one parameter indicative of a signal quality associated with a location of a mobile station, which reads on the claimed "continuously monitoring radio signals associated with the established call", comparing said parameter with a criteria to provide a comparison result and initiating a position request based on the result of said comparison, which reads on the claimed "determine if a parameter associated with continuously monitored radio signal falls below a threshold" and "provide information associated with the location of the mobile terminal if the parameter falls below the threshold" (see column 4, lines 22-40) While Hogan it appears the monitoring of signals is done while a call is in process and not while a mobile unit is idle, he fails to specifically point out the receiving a connect message from a mobile terminal to establish a call.

Zadeh et al. discloses a method of optimizing an telecommunications network where a predefined event, such as a call set-up event, triggers a positioning request and stores the information in a database for subsequent analysis (see column 3, lines 3-18).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Hogan with Zadeh et al. to include the above call set-up trigger to trigger the continuous monitoring disclosed by Hogan in order to avoid using system resources monitoring idle phones where not as much information may be obtained.

Regarding claim 8, the combination of Hogan and Zadeh et al. discloses a system where a call set-up triggers the continuous monitoring of the call, and it is further disclosed that the invention may be implemented by computer and stored within computer memory not necessarily in a mobile terminal, but instead within a base station or a central broadcasting center (see Zadeh et al. column 7 line 60 – column 8, line 2), which reads on the claimed Position Control Center in the MSC. Also, it is disclosed that the monitoring could occur in a base station controller, an MSC, or a node separate from either the BSC or MSC (see Hogan column 5, lines 34-49), which reads on the claimed Position Detection Center for continuous monitoring of the signal.

Regarding claim 11, the combination of Hogan and Zadeh et al. discloses the use of a GPS receiver to determine the location (see Hogan figure 1) and GPS receivers give location information in terms of Longitude and Latitude.

Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hogan in view of Zadeh et al. as applied to claims 1 and 7 above, and further in view of O'Donnell (US006266514B1).

Regarding claims 4 and 10, the combination of Hogan and Zadeh et al. discloses the use of various thresholds, however, not a threshold corresponding to zero signal strength.

O'Donnell discloses the use of a signal strength threshold to trigger a positioning information request to map out areas of poor coverage in a network (see column 2, line 64 – column 3, line 11). While a specific number is not disclosed, zero would be an obvious choice.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Hogan and Zadeh et al. to include the above signal strength threshold disclosed by O'Donnell in order to provide the locations where no signal is present.

Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hogan in view of Zadeh et al. as applied to claims 1 and 7 above, and further in view of Rowles et al.

Regarding claims 6 and 12, the combination of Hogan and Zadeh et al. does strongly suggest associating the records with the time that they occur (see Zadeh et al, column 8, lines 55-59 and figure 3), however it is not entirely clear that a time stamp would be added to the record.

Rowles et al. also discloses system for monitoring and tracking system performance where a time marker is associated with the occurrence of each fault when it is recorded (see column 2, line 61).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Hogan and Zadeh et al. to include the above time stamp to assist in troubleshooting the cause of a problem as it may be associated with the amount of traffic or another time-related issue.

#### ***Allowable Subject Matter***

Claims 3 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 3 and 9, the prior art applied fails to teach a system that continuously monitors a signal and the location of a terminal but, upon receiving a termination message from an MSC indicating normal termination of the call, discards the monitoring information.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Amin et al. (US005995830A) discloses a system and method for processing dropped calls.

Sasaki et al. (US006006089A) discloses a system and method of measuring electric field strength.

Tayloe et al. (US005023900) discloses a cellular radiotelephone diagnostic system.

Gulledge (US005644623A) discloses an automated assessment system for cellular networks by using DTMF signals.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan J Fox whose telephone number is (703) 305-8994. The examiner can normally be reached on Monday through Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2686

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BJF

Nguyen  
3-16-2004

NGUYEN T. VO  
PRIMARY EXAMINER